In The Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1.-3. (Cancelled)

4. (Withdrawn) An implantable medical device according to claim 2, wherein the medical unit comprises one of: a pacemaker lead, a defibrillation lead, a neurological stimulation lead, a combination pacing and defibrillation lead, an artificial heart valve.

5. (Withdrawn) An implantable medical device according to claim 2, wherein the base polymer is selected from the group consisting of polyurethanes, polyurethane copolymers, epoxies, fluoropolymers, polyolefins and silicone rubbers.

6. (Withdrawn) An implantable medical device according to claim 2, wherein the medical unit further comprises a shell having an outer surface, and the casing is formed on at least a portion of the outer surface of the shell.

7. (New) An implantable cardiac stimulation device, comprising:

an atrial sensing circuit;

an atrial pacing circuit; and

a control circuit comprising:

means for determining a time interval between sensed atrial depolarizations of a first cardiac cycle;

means for establishing a loss of capture window during a second cardiac cycle, the loss of capture window including a negative sensing interval within a reference A-A time interval corresponding to the time interval determined for the first cardiac cycle, wherein the negative sensing interval ends coincident

with the end of the reference A-A time interval, and a positive sensing interval of approximately the same duration as the negative sensing interval, wherein the positive sensing interval begins coincident with the end of the reference A-A time interval;

means for causing the atrial pacing circuit to deliver an atrial test pulse of a predetermined energy during the second cardiac cycle, the test pulse being delivered within the reference A-A time interval and prior to the negative sensing interval;

means for determining whether a next sensed atrial depolarization that immediately follows the atrial test pulse occurs within the loss of capture window; and

means for determining whether the atrial test pulse energy is above or below a capture threshold based upon a determination as to whether the next sensed atrial depolarization occurred within the loss of capture window.

8. (New) The device of claim 7, wherein the control circuit further comprises:

means for causing the atrial pacing circuit to deliver another atrial test pulse of an increased predetermined energy during a third cardiac cycle and within the reference A-A interval if the next sensed atrial depolarization occurred within the loss of capture window.

9. (New) The device of claim 8, wherein the control circuit further comprises:

means for conducting three consecutive test cycles wherein each test cycle is constituted by the atrial pacing circuit delivering an atrial test pulse of a predetermined energy during each of three consecutive cardiac cycles and within a reference A-A interval and the means for determining whether the atrial test pulse energy is above or below a capture threshold; and

means for determining an existence of a stable atrial capture based upon at least two of the three atrial test pulses being above the capture threshold.

10. (New) The device of claim 9, wherein the control circuit further comprises:

means for calculating a pacing pulse energy safety margin; and

means for causing the atrial pacing circuit to deliver stimulation pulses at an energy level of the above threshold atrial test pulse plus the pacing pulse energy safety margin.